

REMARKS

Applicants note with appreciation the allowance of claim 17, and also the allowance of claim 5 if rewritten in independent form including all of the limitations of the base claims and any intervening claims. The examiner should note that claim 17 is essentially claim 5 combined with the limitations of claim 1.

The Rejections:

Claim 9 is rejected under 35 U.S.C. 112 2nd Paragraph because it depends on claim 2 when it appears that it should depend on claim 6. The examiner's comments are well taken. Applicants have amended claim 9 to depend on claim 6 rather than claim 2. Applicants therefore believe the rejection under 35 U.S.C. 112 to now be obviated. This amendment corrects a typographical error and should not be construed to be related to patentability.

Claims 1-4 and 16 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,005,876 to Jorgensen et al. The examiner states that among other things, Jorgensen describes an ignition body 8, substantially coextensive with and in physical contact with the propellant 10. The examiner's attention is directed to the figures of Jorgensen and particularly to reference number "7". As explained in column 2, lines 50-64,

"As shown in FIGS. 1 through 4, a combustion cartridge 4 has an elongated, perforated tube 5 forming a housing that encloses an elongated, easily rupturable, hermetically sealed, aluminum container 6. **A small diameter, elongated, steel tube 7, is centrally located inside the container 6. This tube 7 is filled with a pyrotechnic material 8 and also contains an electric squib 9 contiguous with a long fuse 9a. Although the pyrotechnic material 8 may be any of a variety of compositions meeting the requirements for rapid ignition**

and nontoxicity, a typical material for this use is a granular mixture of 25% by weight of boron and 75% of potassium nitrate. *This central tube 7 is surrounded by pellets 10 of a gas generant material* that typically comprises a mixture by weight of 55% sodium azide (NaN_3) and 45% anhydrous chromic chloride (CrCl_3). " *(Emphasis added)*

Accordingly, Jorgenson describes an ignition body 8 that is in physical contact with the tube 7, not with the gas generant body 10. As such, Jorgensen simply does not fully respond to the limitations of any of the pending claims, and in particular, independent claims 1, 6, 11, 15, 16, and new claims 18 and 19. Tube 7 is required as a pressure chamber for ignition and combustion of ignition body 8, as evidenced by the fact that tube 7 ruptures and then releases the combustion products of the igniter tube 7 into the gas generant bed 10 for ignition thereof. At no time does the ignition body 8 come into "physical contact" with the gas generant body 10. Instead, the combustion products of ignition body 10 are liberated from tube 7. Accordingly, applicants respectfully traverse the rejection under Jorgensen, for Jorgensen neither alone or in combination with any reference of record describes the limitations as affirmatively claimed in claim 1 (and in claims 6, 11, 15, 16, 18, and 19). Given this distinction, applicants have not commented on the other aspects of the rejection (or the rejections given below). However, this should not be taken as an admission that the applicants ratify any other aspects of the rejection and Applicants therefore reserve further comment as necessary.

Claims 6, 7, 10, and 15 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Jorgensen in view of U.S. Patent No. 6,315,847 to Lee et al. For the same reasons and comments given above relative to Jorgensen and the rejection of claims 1-4 and 16, (herein incorporated by reference), Applicants respectfully traverse for Lee does not cure the deficiencies of Jorgensen and therefore, none of the references when taken alone or together describe with

particularity all of the limitations of the claims.

Claims 8, 9, 11 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jorgensen in view of Lee and U.S. Patent No. 5,827,996 to Yoshida et al. For the same reasons and comments given above relative to Jorgensen and the rejection of claims 1-4 and 16, (herein incorporated by reference), Applicants respectfully traverse for neither Lee or Yoshida cure the deficiencies of Jorgensen and therefore, none of the references when taken alone or together describe with particularity all of the limitations of the claims.

Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jorgensen in view of Lee and Yoshida, and further in view of U.S. Patent No. 6,077,371 to Lundstrom et al. Again, for the same reasons and comments given above relative to Jorgensen and the rejection of claims 1-4 and 16 (herein incorporated by reference), Applicants respectfully traverse for neither Lee, Yoshida, or Lundstrom cures the deficiencies of Jorgensen and therefore, none of the references when taken alone or together describe with particularity all of the limitations of the claims.

Finally, Applicants take this opportunity to further characterize the invention by adding new claims 18 and 19, and by amending claim 16. The Examiner's consideration is respectfully solicited.

Accordingly, Applicants acknowledge the allowability of claim 17 and further courteously solicit the allowance of claims 1-15, 18, and 19, and passage of the subject application to issue. In essence, a prima facie case of obviousness must be supported by one or more references that teach with particularity all of the limitations of the claims. For the reasons given, neither Jorgensen nor any other reference of record, when taken alone or in combination, responds fully to the limitations of the pending claims. In the absence thereof, a prima facie case of

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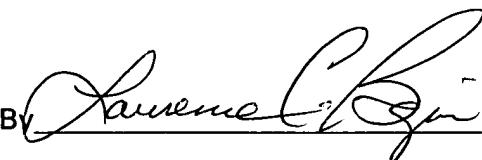
Atty Docket No. GIO-017-US
5702-01017

obviousness is simply not supported. Applicants respectfully request a phone call to the undersigned if the examiner has any further questions relative to the allowability of claims 1-15, 18, and 19.

Concurrently herewith, Applicants note a fee of \$168.00 for two more independent claims in excess of three. Our check in the amount of \$168.00 is included in payment thereof. The Commissioner is authorized to charge any deficiencies or credit any overpayments to Deposit Account No. 04-1311. A duplicate copy of the first page of this transmittal is also enclosed.

Respectfully submitted,

Date 6/11/03

By 

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MARKED UP CLAIMS AND AMENDMENTS

Please amend the following claims:

9. (amended) The gas generator of claim [2] 6 wherein said propellant mixture further comprises strontium carbonate at about 1-30% by weight of said propellant body.

16. (amended) A gas generator for a vehicle occupant protection system comprising:
an elongated housing having a predetermined length and having a first end and a second end;
a plurality of gas exit orifices spaced along the length of said housing;
a solid unitary propellant body contained within said housing, said propellant body having a length substantially coextensive with said housing; and
an ignition body substantially coextensive with said propellant, said ignition body in physical contact with said propellant for substantially the length of said propellant and said ignition body having a burn rate at least twice that of said propellant body; and
a plurality of filters wherein each filter corresponds to and is fixed over at least one gas exit orifice in said plurality of gas exit orifices thereby filtering gases exiting the gas generator,
wherein ignition of said ignition body essentially provides uniform ignition and combustion of said propellant body along the entire length thereof.